
CONSERVATION UPDATE

State Energy Programs

January 1997

Arizona

Arizona Department of Commerce Energy Office receives recognition award

The Arizona Department of Commerce Energy Office's Solar Information and Education Program received a Certificate of Recognition for the 1996 National Awards for Energy Efficiency and Renewable Energy. The program includes activities for students in all grades. Last year, two Arizona high schools participated in Solar Bikerayce '96 through the program. One of the entries placed in the top three and later competed in a similar race in Japan.

More than 200 middle school students participated in the annual Junior Solar Sprint Program co-sponsored by the Energy Office. These students constructed mini solar racers and competed in a statewide competition. The elementary school program has been implemented in more than 700 classrooms throughout the state, with approximately 5,000 students building solar box cookers and several elementary schools sponsoring solar potlucks each year.

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Iowa

Department of Natural Resources receives Innovation Fund loan

The Iowa Department of Natural Resources was awarded one of four Iowa Governor's Innovation Fund loans to make an additional \$12 million in energy improvements in state facilities. The fund loans money to state agencies that can demonstrate an opportunity to save the state money through innovative projects; the money is repaid to the state from the savings accrued. The Department of Natural Resources has developed a program to use private-sector capital to implement energy-saving improvements in state agency buildings. The agencies repay the cost of the improvements and the small innovation loan for administration from the energy savings.

By combining the Innovation Fund project with the existing State of Iowa Facilities Improvement Corporation, a non-profit corporation set up within state government to make energy improvements in state agencies, at least \$68 million in improvements will be completed by 2000. In 1997, the Department is targeting \$3 million in improvements for the Departments of Human Services, Corrections, and General Services, which includes the capital complex in Des Moines.

While the initial costs have been funded by the Innovation Fund, this program will be self-sustaining through fees assessed to clients based on the services they use. This will allow the Department to leverage the \$150,000 loan from the Governor's office to make \$12 million in additional improvements and save the state \$2 million annually.

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Rebuild Iowa addresses community needs

Rebuild Iowa, the state's version of *Rebuild America*, expands Iowa's focus from serving public facilities with energy-efficiency programs to serving entire communities. This program will allow communities to hire coordinators from their hometowns to market the concepts of *Rebuild Iowa* to their own citizens. Local financiers, contractors, suppliers, and analysts will also finance, install, and monitor the improvements in the facilities. By using local businesses and financiers, every dollar spent in the community can turn over up to seven times, thereby enhancing economic development.

The Department of Natural Resources is proud to announce the five Rebuild Iowa showcase communities participating in the program:

- Greater Des Moines
- Hancock County
- City of Sioux Center
- Wapello County
- City of Webster City

These communities are expected to invest \$43 million within the first 24 months of the program, with an estimated savings of nearly \$7 million annually. This commitment, plus the commitment from the Iowa Department of Natural Resources and other partners, will provide a sound footing for *Rebuild Iowa* to move beyond the first five communities into a statewide effort, which will have an even greater impact on Iowa's environment and economy.

The Department estimates that in public facilities alone, there is the potential for \$300 million in improvements, which would save \$24 million annually. In addition to those savings, there would be a reduction of 461,362 tons of CO₂, 666 tons of NO_x, 877 tons of particulate, and 7,522 tons of SO₂.

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Kentucky

Kentucky purchases ethanol-capable vehicles for state fleet

Over the past two years, the Kentucky Division of Fleet Management (which manages the State Motor Pool) has purchased 175 vehicles capable of being fueled by any mixture of ethanol and gasoline up to 85% ethanol (E-85). The vehicles are Ford Taurus FFVs (flexible fueled vehicles). Approximately 100 more vehicles are expected to be ordered in 1997. The division is working with the Kentucky Corn Growers' Association and other groups to establish E-85 refueling facilities for state and other ethanol-fueled vehicles.

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Massachusetts

Division of Energy Resources expands its Energy Conservation Service

The Massachusetts Division of Energy Resources (DOER) has expanded its no-fee, residential Energy Conservation Service (ECS) to include an appliance component. According to DOER Commissioner David O'Connor, the service was developed to help consumers understand how appliances and entertainment, home office, and personal comfort equipment affect their energy bills.

The new Appliance Efficiency Education Service teaches homeowners, building owners, and tenants to (a) make an inventory of home appliances and estimate energy consumption ranges for each appliance; (b) estimate the cost of running each appliance; (c) reduce appliance energy consumption; and (d) choose an efficient appliance by reading the Energy Guide Labels, calculating lifetime operating costs, and understanding the energy-savings features of large appliances.

The ECS program is available to all Massachusetts residential customers through their local utility companies. ECS provides whole-house energy audits; demonstration of installing low-cost, energy-conserving, do-it-yourself materials (low-flow shower heads, weather stripping, hot water tank wrap, etc.); assistance in finding qualified energy conservation contractors; technical assistance; and free inspections of energy conservation installations. More than 50,000 Massachusetts households benefited from this program in 1996.

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Better Buildings Project wins \$400,000 grant

The Massachusetts Division of Energy Resources (DOER) and the Board of Building Regulations and Standards (BBRS) have won \$400,000 from USDOE to run a statewide code training and technical assistance program. The program, to begin in 1997, will help builders, architects, and code officials understand and implement the building code's energy efficiency standards.

The winning proposal, developed with the assistance of the Boston Edison Settlement Board, launches Phase 11 of the Massachusetts Better Buildings Project. The project seeks to reduce energy costs in new construction by improving building code efficiency standards and implementation. The project was created by DOER, BBRS, and the Boston Settlement Board in partnership with utilities, builders, architects, and efficiency advocates.

Under the grant, DOER and BBRS will work with the partners and others to (a) adopt cost-effective amendments to the code's efficiency standards for new commercial construction; (b) work with nearby states to make building codes more consistent across state lines. (Better consistency will help builders and architects who work in several states to meet code requirements and cut costs.); and (c) conduct a case study of the state's efforts to develop, support, and adopt enhanced energy codes. The findings will be used to help other states build partnerships, leverage resources, and reduce energy costs in new construction.

A 1995 grant from USDOE helped the Better Buildings Project identify cost-effective upgrades to the efficiency standards for new residential buildings and replacement windows. Estimates show that the upgrades could save Massachusetts residents \$5.1 million in annual energy costs by 2001.

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Nebraska

Low-interest energy loans remain popular in Nebraska

Nebraska has made energy efficiency improvements totalling more than \$73 million using a loan pool of \$19.9 million in oil overcharge funds in the Dollar and Energy Saving Loan Program.

These low-interest loans finance home, building, transportation, and system improvements. The most common improvements in homes, apartments, and small businesses are upgrades to furnaces, air conditioning, and insulation.

Popular agricultural improvements include installing low-pressure irrigation systems, replacing irrigation pumps and motors, making well modifications, and replacing grain dryers. City and county governments generally upgrade boilers and furnaces and install heat pumps.

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Rebuild America Program comes to Nebraska

Rebuild Nebraska is a new three-year effort to increase the use of energy-efficient technologies in existing commercial and multi-family buildings.

The state signed on at the national level as a *Rebuild America* partner. The Housing Authority in Lincoln and the Midwest Covenant Home in Stromsburg recently signed participation agreements and are Nebraska's first partners at the state level.

Rebuild Nebraska will bring together 150 partners over a three-year period. The goal is to increase the energy efficiency of participating commercial and multi-family buildings by at least 25 percent through retrofitting existing equipment.

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North Carolina

Greenhouse gases report issued by state energy officials

An inventory report on greenhouse gas emissions in North Carolina was released recently by the state energy division and the U.S. Environmental Protection Agency as part of a national effort to mitigate the impact that these gases have on global warming. A detailed study of all the sources within the state that emit greenhouse gases, the report is providing state and federal officials with a comprehensive picture of the volume of greenhouse gases produced in various parts of the state. The report will help officials determine what steps need to be taken to lessen the impact of the gases on environmental quality. In particular, the greenhouse gas inventory has given the energy

division the data to determine the volume of methane gas being produced by the state's livestock. Methane gas, which is produced by animal wastes, can be readily used for fuel, and the inventory showed that significant sources of methane gas are available. Among the country's leaders in the production of beef, poultry, and hogs, the state's agricultural community could provide a significant methane fuel source for electricity or heat production. Others taking part in the greenhouse gas inventory included the Air Quality and Solid Waste sections of the North Carolina Department of the Environment, Health and Natural Resources; the N.C. Department of Agriculture; the N.C. Department of Transportation; and the N.C. Recycling Association.

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South Carolina

Retiring director honored by USDOE

Jay Flanagan, Director of the South Carolina Energy Office, recently announced his retirement, but not before being awarded the U.S. Department of Energy's State and Community Programs Recognition Award for his commitment and initiative in making a significant impact on energy in South Carolina.

Under Flanagan's leadership, the Energy Office has started ***The Energy Bank Partnership*** to help public agencies make energy-efficient improvements in their facilities. This nationally recognized program is the key strategy in the Energy Office's mission to maximize energy efficiency in state agencies and public school districts. Specific objectives are to support comprehensive energy planning, implement cost-effective energy projects, and measure energy and cost savings. The Energy Bank Partnership was developed to replace grant assistance for energy projects.

Flanagan has also guided the office in developing a comprehensive State Energy Action Plan that systematically lays out a direction, vision, and financial plan to address energy efficiency programs for the major sectors of the economy. Flanagan also promoted legislation to update the statewide building energy efficiency code and its enforcement; sponsored a sustainable building products trade show for the Southeast; obtained insurance industry support for installation of dry hydrants to replace PVE grant support; and established a review process in conjunction with the Office of the State Engineer for state agency efficiency projects.

Flanagan's retirement is effective February 1, 1997. He will be succeeded by Mitch Perkins, former program manager of the funding and evaluation team of the SC Energy Office.

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Energy Office seeking Financial Services Coordinator

The South Carolina Budget and Control Energy Office is creating a new staff position to assist Energy Bank Partnership clients in financing energy efficiency improvement projects. The Financial Services Coordinator will work with private lending institutions and the State Treasurer's Office to develop lease purchase financing programs and a revolving PVE loan fund.

The Coordinator will also present information on financing options to public agencies and private organizations and serve as liaison between borrowers and financing sources. The Energy Office plans to hire a qualified person with a bachelor's degree and professional experience in banking or public finance in the salary range of \$30,000-\$40,000.

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Tennessee

State Building Energy Management Committee plans to host meeting with neighboring states

For the past three years, the Tennessee Department of General Services, State Building Energy Management Committee, has been defining and planning strategies to provide more energy-efficient and cost-saving measures in Tennessee's state-owned buildings. Also involved in this effort are facility management representatives of the State Board of Regents; the Departments of Environment and Conservation, Corrections, the Military, and Education; and employee liaisons from all other state departments.

The committee is preparing to host a spring 1997 meeting to include energy management administrators from surrounding and other nearby states. Proposed topics include establishing performance contracting as an effective option and a panel discussion on how other states are meeting energy management objectives in a government setting of aging buildings and tight budgets.

Building energy management administrators from other state government offices are invited to attend.

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Wisconsin

Governor releases energy policy statement

Citing Wisconsin's accomplishments and its future needs, Governor Tommy G. Thompson recently released an energy policy statement, the precursor to a state energy action plan which is expected to be completed this year. Despite its lack of conventional energy reserves, Wisconsin's economy has become increasingly productive and more efficient over the past 20 years. The state's economy has grown twice as fast as its energy use, primarily through investing in more efficient buildings, manufacturing processes, appliances, and vehicles and doubling the use of Wisconsin's renewable resources. However, Thompson says further improvements in energy use will be necessary to minimize future energy shortages, price increases, and infrastructure investments.

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Ethanol plant receives innovative renewable energy award

For the first time in over ten years, a Wisconsin company is producing ethanol. Renewable Oxygenates Industries (ROI), Plover, began producing ethanol last July and has been increasing production and distributing ethanol to local outlets

ever since. ROI recently received a \$400,000 grant from US DOE for a major expansion. The project is one of just eight innovative renewable energy projects nationwide to be selected for a grant from DOE's Commercialization Ventures Program. When the Plover plant began operation, it used a locally available waste, cheese whey permeate (a cheesemaking byproduct), as a feedstock. With its new grant, ROI will also turn potato wastes—an abundant local feedstock from several nearby potato processing plants—into about one million gallons of ethanol per year using a new proprietary process. Only one other potato waste-to-ethanol plant exists in the United States. Total plant capacity is about 2.5 million gallons per year, which ROI hopes to produce in the future. The plant has been retrofitted with modern electronic processing equipment and is now one of the most automated in the country.

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Largest wind effort in state under development

Wisconsin's electric utilities are undertaking the state's largest wind energy initiative, which will soon bring wind energy

use closer to reality in Wisconsin. Four eastern Wisconsin Class A utilities have announced that the first large-scale wind energy turbines will soon be installed in Wisconsin. Tacke Windpower, a German firm, will install two 600 kilowatt turbines on a hill just southeast of De Pere this spring. Each wind turbine, 15 times larger than any previously installed wind turbines in Wisconsin, has three 75-foot blades and will sit atop 200-foot towers. At full output, each machine can supply power to about 300 homes. These wind turbines are specifically designed for Wisconsin's moderate wind regimes.

By installing and operating these large machines, the utilities hope to gain valuable experience for future wind energy development. A second wind energy initiative, conducted cooperatively by the Wisconsin Energy Bureau, the state's electric utilities, the National Renewable Energy Laboratory (NREL), and other partners, will identify and measure wind speeds at 15 of the most promising wind energy locations in the state.

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